



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,432	10/15/2003	Yoshiyuki Sasaki	R2184.0266/P266	3897
24998	7590	12/12/2006	EXAMINER	
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			GOMA, TAWFIK A	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,432

Applicant(s)

SASAKI, YOSHIYUKI

Examiner

Tawfik Goma

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10 and 11 are rejected under 35 U.S.C. 101.

Claim 10 is drawn to a “program” *per se* as recited in the preamble and as such is non-statutory subject matter. Claim 11 is drawn to a “storage medium that stores a program” *per se* as recited in the preamble and as such is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Claims 10 and 11 are drawn to a Data structures not claimed as embodied in tangible computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed tangible computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as

computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-6 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mine (US 5978336).

Regarding claim 1, Mine discloses a data recording device, comprising: a recording unit that records data on a recording medium (fig. 2), said recording medium including a plurality of recorded regions each having data recorded by the recording unit and a plurality of unrecorded regions without any data recorded (fig. 11A, 11B); and a recording state determination unit that stores recording state data for distinguishing the recorded regions from the unrecorded regions (2, fig. 2 and fig. 3); wherein the recording unit includes a mark recording unit configured to record a mark in one of the unrecorded regions preceding an object region to which the recording unit is to record data (To be recorded in Finalization region, fig. 11B), said mark enabling reading of the object region (col. 5 lines 58-65); and the recording state determination unit identifies said marked region as one of the unrecorded regions (col. 5 lines 42-53).

Regarding claim 2, Mine further discloses wherein the mark includes dummy data used for generating a synchronization signal when reading data on the recording medium (col. 6 lines 25-32).

Regarding claim 4, Mine further discloses wherein the recording state determination unit stores the recording state data for each minimum recording region of the recording medium to determine a recording state of each of the minimum recording regions (figs. 6, 8).

Regarding claim 5, Mine further discloses wherein the recording state determination unit distinguishes the recorded region from the unrecorded region based on a bitmap including a plurality of one-bit recording state flags (col. 4 lines 26-40).

Regarding claim 6, Mine further discloses a recording-state flag storing unit configured to store the recording state flags (fig. 2 and figs. 6 and 8).

Regarding claim 9, Mine discloses a method for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded (fig. 3), the method comprising the steps of: storing recording state data for distinguishing the recorded regions from the unrecorded regions (s20, fig. 5, s30, fig. 7); recording a mark in one of the unrecorded regions preceding an object region to which data are to be recorded (figs. 11A, 11B), said mark enabling reading of the object region; and identifying said marked region as one of the unrecorded regions (col. 6 lines 3-15).

Regarding claim 10, Mine discloses a program executable by a computer (Software, fig. 2) for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded (figs. 11a,

11b), the program comprising the steps of: storing recording state data for distinguishing the recorded regions from the unrecorded regions (fig. 6, fig. 8); recording a mark in one of the unrecorded regions preceding an object region to which data are to be recorded (figs. 11a, 11b), said mark enabling reading of the object region; and identifying said marked region as one of the unrecorded regions (col. 6 lines 21-24).

Regarding claim 11, Mine discloses a storage medium that stores a program executable by a computer (2, fig. 2) for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded (figs 11a, 11b), the program comprising the steps of: storing recording state data for distinguishing the recorded regions from the unrecorded regions (20, fig. 5, 30, fig. 7); recording a mark in one of the unrecorded regions preceding an object region to which data are to be recorded, said mark enabling reading of the object region; and identifying said marked region as one of the unrecorded regions (70, fig. 3).

Regarding claim 12, Mine discloses a data recording system (1, fig. 2) comprising: a host computer (2, fig. 2); and a data recording device (3, fig. 2), wherein the data recording device comprises: a recording unit that records data on a recording medium (3, fig. 2), said recording medium including a plurality of recorded regions each having data recorded by the recording unit and a plurality of unrecorded regions without any data recorded (col. 4 lines 25-39); and a recording state determination unit that stores recording state data for distinguishing the recorded regions from the unrecorded regions (figs. 6, 8); wherein the recording unit includes a mark recording unit configured to record a mark in one of the unrecorded regions preceding an object region to which the recording unit is to record data (s70, fig. 3 and figs. 11a, 11b), said mark

Art Unit: 2627

enabling reading of the object region (col. 5 lines 65); and the recording state determination unit identifies said marked region as one of the unrecorded regions (figs. 11a, 11b).

Claims 1, 3, and 5-8 rejected under 35 U.S.C. 102(b) as being anticipated by Mine (US 6243338).

Regarding claim 1, Mine discloses a data recording device, comprising: a recording unit that records data on a recording medium (fig. 1), said recording medium including a plurality of recorded regions each having data recorded by the recording unit and a plurality of unrecorded regions without any data recorded (col. 8 lines 47-58); and a recording state determination unit that stores recording state data for distinguishing the recorded regions from the unrecorded regions (col. 8 lines 59-63); wherein the recording unit includes a mark recording unit configured to record a mark in one of the unrecorded regions preceding an object region to which the recording unit is to record data (finalization data, fig. 9), said mark enabling reading of the object region (abstract); and the recording state determination unit identifies said marked region as one of the unrecorded regions (fig. 18).

Regarding claim 3, Mine discloses wherein the mark includes one ECC block of dummy data (fig. 11) when the recording medium is in compliance with a DVD+RW disk standard (col. 4 lines 48-50).

Regarding claim 5, Mine further discloses wherein the recording state determination unit distinguishes the recorded region from the unrecorded region based on a bitmap including a plurality of one-bit recording state flags (fig. 11).

Regarding claim 6, Mine further discloses a recording-state flag storing unit configured to store the recording state flags (23, fig. 1, and col. 8 lines 64-66).

Regarding claim 7, Mine further discloses a recording state flag recording unit configured to record the recording state flags to a recording state flag recording region in the recording medium (WBBM, col. 8 lines 64-66).

Regarding claim 8, Mine further discloses wherein the recording state flag recording region is allocated in a Formatting Disk Control Block (FDCB) in a lead-in area of the recording medium (col. 8 lines 64-66), when the recording medium is in compliance with a DVD+RW disk standard (col. 4 lines 48-50).


Conclusion

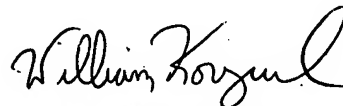
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


T. Goma
12/7/2006


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600